Minutes of WP-meeting 361

Attendance:
Zoom: Yumi Aoki, Paul Collas, Keisuke Fujii, Serguei Ganjour, Jochen Kaminski, Jurina Nakajima, Shinya Narita, Tomohisa Ogawa, Oliver Schäfer, Ron Settles, Jan Timmermans, Maxim Titov, Keita Yumino

General News:
Keisuke summarized the political situation in Japan:
The LDP has won the election, but one of the strong supporters of ILC, Mr. Akira Amari, lost his seat in the so-called small district constituency.
He was, however, elected (resurrected) in the so-called proportionally represented constituency but nevertheless had to step down from the number two position (secretary general) of the LDP.
The federation of the diet members for the ILC is an important association to promote the ILC. Its vice chair, Mr. Shuichi Suzuki kept his finance minister position. However, its previous chair Mr. Takeo Kawamura is now fully retired and the chair position is open now. So, the federation has to replace its leadership. For this reason the impression might arise, that the process has stalled (e.g. in the European ILC community meeting presentation by Tatsuya Nakada), but this is only for a short time and will change in time.
There was also the third meeting of the MEXT panel for studying the ILC. Keisuke expects that a recommendation will still be given in this fiscal year. He hopes, that it will support the start of the prelab phase at least partially.

Maxim has no information from the speakers' bureau yet. However, we are still looking for a candidate to give a presentation or show a poster, if the LCTPC abstract is accepted for the VCI2022. It has to be in person.

Shinya mentioned, that there will be an ILD-TC meeting tomorrow. There will also be a 109th plenary ECFA meeting on the 18th and 19th of November (https://indico.cern.ch/event/1085137/) with a session on the ECFA studies towards a Higgs/EW/Top factories.

PCMAG/LP setup, test beam:
Oliver: Test beam schedule:

- Oliver mentioned, that the test beam is running normally and there are no changes in the Covid rules at DESY regarding the test beam.

News from the groups:
Yumi gave a presentation on the z resolution of the Asian module with and without the gating device. The analysis is based on the data taken during the test beam in 2016. Yumi used for the analysis the inflection point method. Initially she was concentrating on the pad with the highest charge deposition. When comparing the the longitudinal spatial resolution of data with and without magnetic field. A 20 percent improvement of the performance was observed with the magnetic field, which could be explained by concentrating more charge on the central pad. Yumi then showed a study on the signal shape, which is influenced both by the longitudinal diffusion and the shaper of the electronics. The electronics has two parameters, n=3 and the peaking time, which is nominally $t_p = 120$ ns. If the z-dependence of the longitudinal spatial resolution is fitted with $\sigma_z^2 = \sigma_0^2 + C_{dL}^2 \cdot z$, the longitudinal diffusion constant can be extracted. One finds $C_{dL} = 267.4$ µm/√cm, which is significantly higher than

the Magboltz value of 226.1 µm/√cm. If, however, a peaking time of t_p = 135 ns is assumed for the electronics, then the diffusion coefficient becomes C_{dL} = 226 µm/√cm. Therefore, Yumi wants to check the peaking time of the electronics with the help of a pulse generator. As an alternative approach, C_{dL} can be extracted from $C_{dL} = C_D/N_{eff}$ by assuming the same N_{eff} = 23.9 as in the rϕ-direction. This gives also a value for C_{dL} which is too high compared to Magboltz results. As a last test, Yumi used all the pads which belong to a hit and not only the central one. This improves the results and together with N_{eff} = 23.9 it give a value of C_{dL} = 226.3 consistent with Magboltz. This method is going to be improved further. After the presentation, several questions were asked. For example the impact of the field distortions at the module borders was asked. But, Yumi has concentrated on the central row #16 sofar and will study the border effects later

AOB:

Uli is having his rehearsal for his PhD defense.

The next workpackage meeting will take place on December 2nd.